

We Claim:

1. An analog sound reproducing system for a model train traveling on a plurality of rails that uses a amplified digital control signal for propulsion and control, the system comprising:

an analog sound memory storing a plurality of sound effects at predetermined addresses;

a controller connected to the sound memory for recalling the analog sound effects of either one or a plurality of sound effects in a predetermined sequence or a random sequence;

a sound memory containing multiple analog samples that emulate a model locomotive at various speeds and work loads;

an integrated analog sound, motor and special effects controller controlled by a bi-polar digital signal, the motor and special effects controller reproducing the stored analog sounds contained in the model train; and

a digital packet triggering a sound effect for automatic playback of a sound effect.

2. The system according to Claim 1 wherein the model train has two rails for providing a digital signal and powering the sound effects of the model train, motor, and special effects system.

3. The system according to Claim 1 further comprising:

an electrical power supply in the rail car or track side structure having a means for collecting the digital bi-polar signal from either of the two insulated tracks by a pick up on two insulated wheels or off of a digital buss line or overhead wire;

a full wave bridge rectifier with ^{an input} ~~one half~~ connected

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17. The system of Claim 1 wherein the enabling means is an internally triggered Hall-effect sensor responding to a change in a magnetic field.

18. The system of Claim 1 further comprising:

a magnet; and

a pendulum on which the magnet is suspended wherein motion causes the magnet to transpose resulting in a change in the magnetic field.

19. The system of Claim 1 further comprising:

a microphone constructed and arranged to record the at least one additional characteristic sound on the sound module means.

20. The system of Claim 1 wherein the activation means is a magnetically responsive sensor constructed and arranged near a magnetic field, the magnetic field altered by a magnet.

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